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# *Bulbophyllum boudetiana* (Orchidaceae), a New Species from the Brazilian Atlantic Forest, Espírito Santo

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**ABSTRACT.** *Bulbophyllum boudetiana* Fraga (Orchidaceae), a new species from Espírito Santo that grows in saxicolous vegetation mats on an inselberg in the Brazilian Atlantic forest, is described, illustrated, and compared with related species. This new species is related to *Bulbophyllum kautskyi*, from which it differs by yellow flowers with cream spots, abbreviated rhizomes, aggregate and ovoid pseudobulbs, petals scale-shaped, labellum thick-fleshy, and disc slightly sulcate and ciliate on the base.

**Key words:** Atlantic forest, Brazil, *Bulbophyllum*, Espírito Santo, Orchidaceae.

The eastern Brazilian Atlantic coastal forest extends for more than 3000 km as an almost continuous band formed by a chain of mountain ranges that parallel the Atlantic Ocean, isolated by vast stretches of cerrado and caatinga from the moist forest of the Amazon basin and characterized by a high percentage of plant endemism (Mori et al., 1981). The high species richness of the vegetation mats and of most other plant communities on eastern Brazilian inselbergs is exceptional when compared to other tropical areas. Rock outcrops usually do not attract much agricultural interest: they have frequently been preserved from human impact and have kept their refugial character (Porembski et al., 1998). As a result of fieldwork at various inselbergs in Espírito Santo, I have found a new orchid species on the Pedra Branca (white rock) inselberg that is described and illustrated in this paper.

Currently 1100 species are recognized in *Bulbophyllum* Thouars, which has a pantropical distribution (Dressler, 1993). The last revision of this genus for Brazil was that of Cogniaux (1902), in which 42 species were recorded; according to Pabst and Dungs (1975, 1977) this number was raised to 54. Since then, 3 species have been described in recent publications of Borba et al. (1998), Fraga (1999), and Brito (2000), making a total of 57 species.

***Bulbophyllum boudetiana*** Fraga, sp. nov. TYPE: Brazil. Espírito Santo: Serra, Pedra Branca, elev. 300 m, 11 July 2000 (fl), C. N. Fraga 636 (holotype, MBML; isotype, RB). Figure 1.

Haec species *Bulbophyllo kautskyi* similis, sed pseudobulbis aggregatis et ovoideis, petalis squamiformibus, labello crasse carnosio et ciliato cum marginibus non revolutis differt.

Plants epiphytic, creeping, up to 4 cm tall. Roots many, 0.5 mm diam., fasciculate, terete, glabrous, emerging near the margins with the pseudobulb. Rhizomes ca. 2 mm diam., abbreviated, internodes 2–3 mm long. Pseudobulbs 6–8 × 5–8 mm, aggregate, erect, ovoid, each 4-angled, monophyllous, yellow. Leaves 18–32 × 6–8 mm, sessile, oblong to elliptic-oblong, erect-patent, coriaceous, obtuse-attenuate at base, apex acute-apiculate, green. Inflorescence emerging from below pseudobulb, up to 25 cm long, spicate, usually pendulous, producing 10 to 15 flowers, green to yellow; peduncle 11–13 cm long, terete, elongate, with small, appressed, tubular, widely spaced, 4 to 5 pale sterile bracts; rachis 10–12 cm long, straight to flexuous, sub-terete; floral bracts 3–4 × 1–2 mm, ovate-triangular, amplexicaul, acute-acuminate, usually spreading, yellow or green when young and paleaceous at anthesis. Flowers opening in succession, occasionally 2 flowers at anthesis simultaneously, yellow with brown cream spots; ovary with pedicel up to 1.5 mm, slightly obconical, sulcate, somewhat twisted and curved, cream; dorsal sepal 3.5–4.5 × 2–3 mm, ovate-lanceolate, glabrous, concave, acuminate, 3-veined, yellowish with nut-brown spots; lateral sepals 5–6.5 × 2.5–3.5 mm across the basal portion, free, glabrous, triangular-ovate, distinctly acuminate, oblique, deflexed, 3-veined, yellow toward apex with cream points toward base; petals small, 0.4–0.6 × 1.5–2 mm, covered with scales, glabrous, appressed to column, yellow toward apex and translucent toward base; labellum 4.5–5.5 × 2–3 mm, up to 2 mm wide when spread, articulate with the column foot, thick-fleshy, ovate-ligulate from above, disc slightly sulcate and ciliate at the

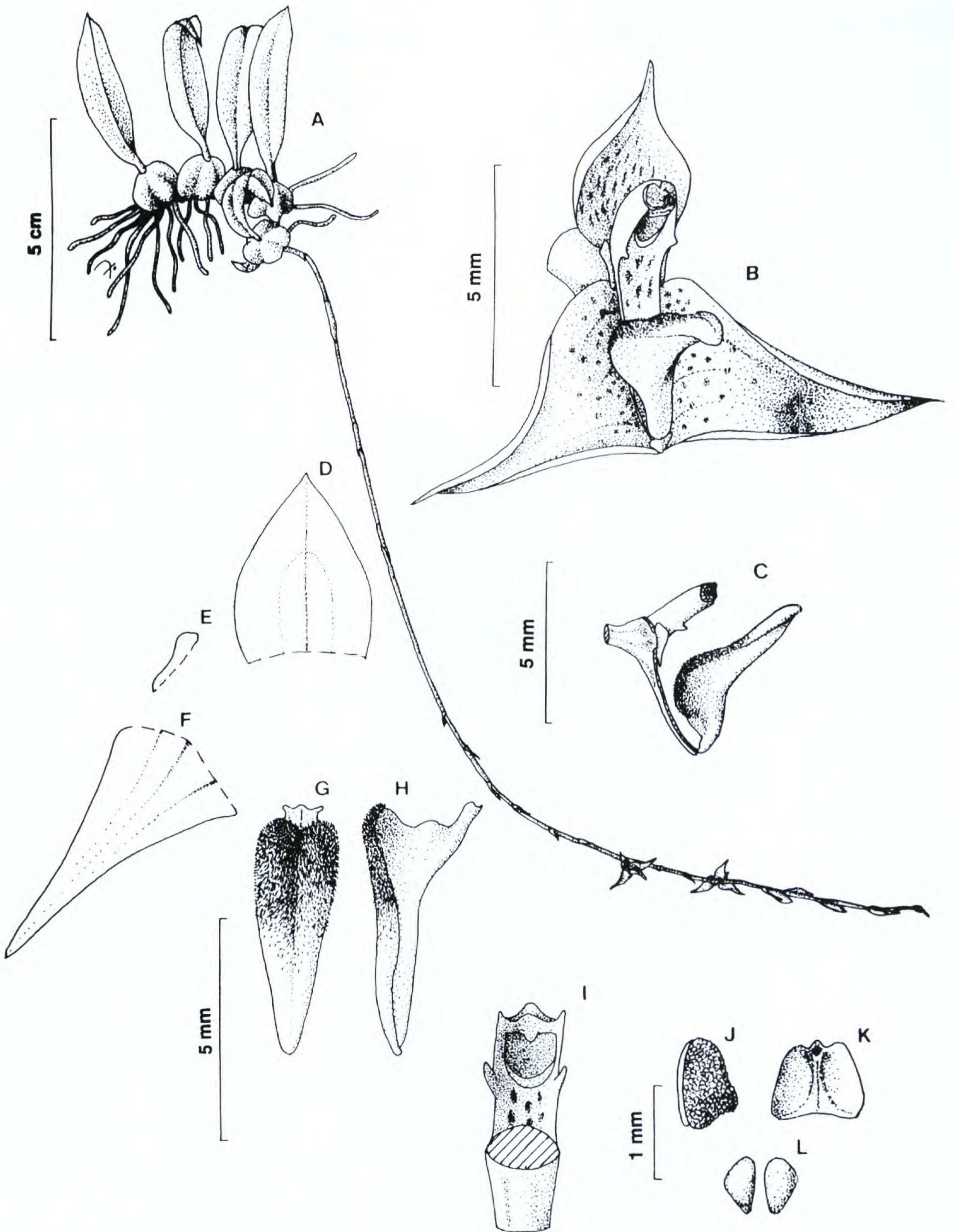


Figure 1. *Bulbophyllum boudetiana* Fraga. —A. Habit and inflorescence. —B. Flower. —C. Ovary, petals, lip, and column in side view with sepals removed. —D. Dorsal sepal, from above. —E. Petal, from above. —F. Lateral sepal, from above. —G. Lip, from above. —H. Lip, in side view. —I. Ovary and column in lower view. —J. Anther in side view. —K. Anther, from below. —L. Pollinia. Drawn from the holotype (C. N. Fraga 636), by C. N. Fraga.

base, geniculate in side view, abaxially provided with an amorphous callosity or keel, base geniculate, apex acute; column 1–1.5 × 0.5–0.7 mm, thick, provided with two rudimentary arms at apex and two small falcate teeth on the abaxial margins or less in the middle, prolonged into 3.5–4 mm long, curved foot, white with nut-brown spots on the abaxial face; anther 1 × 1 mm, apical, versatile, papillose, two pairs of pollinia, white.

*Etymology.* The name of the new species pays homage to Helio de Queiroz Boudet Fernandes, director of the Mello Leitão Biological Museum and Herbarium MBML curator in Santa Teresa, Espírito Santo.

In the field, *Bulbophyllum boudetiana* is recognized by its yellow flowers with cream spots, abbreviated rhizomes, 2–3 mm between the aggregate and ovoid pseudobulbs, petals covered with scales, labellum thick-fleshy, and disc slightly sulcate and ciliate at the base and with non-revolute margins; *Bulbophyllum kautskyi* Toscano has dark purple flowers, with usually green spots and yellow base, woody rhizomes with several articulations, 15–20 mm between the conical to narrowly ovoid pseudobulbs, petals acute, labellum fleshy, and disc slightly sulcate and glabrous and with revolute margins.

The new species is known only from the type locality but may be expected in adjacent saxicolous

vegetation mats on inselbergs in the Brazilian Atlantic forest in Espírito Santo.

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